DOCUMENT MODIFICATION REQUEST (DMR)

Refer to 1-A01-PPG-001 for Processing Instructions
***Print** or **Type** All Information (Except Signatures)*

1 Date	25 DMR No
1/30/95	2-27-95 DMR 95-DMR-000104

2 Existing Document Number/Revision	3 New Document Number or Document Number if it is to be changed with this Revision
5-21000-OPS-GT 1/Rev 2	N/A

4 Originator's Name/Phone/Pager/Location	5 Document Title
N Elzinga/740-2740/WCFS Denver	Logging Alluvial and Bedrock Material

6 Document Type: ☒ Procedure ☐ Other _____

7 Document Modification Type (Check only one): ☐ New ☐ Revision ☐ Intent Change ☒ Nonintent Change ☐ Editorial Correction ☐ Cancellation

8 Item	9 Page	10 Step	11 Proposed Modifications
1	8	5 1 2 1	Add to the end of paragraph 6 "This detailed sieving and grain size analysis will not be required for the boreholes drilled as part of the OU-2 Trenches and Mound Site Characterization Program The geologist's field log will be sufficient for subsurface interpretation purposes "
2	31	6 2 4	Add to the end of this section "Core photography requirements will be lifted for those cores generated by the OU-2 Trenches and Mound Site Characterization Program "

12. Justification (Reason for Modification EJO # TP # etc)

1 Sufficient stratigraphic information is available from existing boreholes that were described and classified previously These existing boreholes are in close proximity to the trench investigation locations

2 Substantial time and cost savings will be realized by using existing stratigraphic data

OU 2 Temporary Limited Scope Expires July 31, 1995

If modification is for a new procedure or a revision list concurring disciplines in Block 13 and enter N/A in Blocks 14 and 15 If modification is for any type of change or a cancellation organizations are listed in Block 13 then Concurror prints, and signs in Block 14, and dates in Block 15

13. Organization	14 Print Sign (if applicable)	15. Date (if applicable)
SME	W R Belcher	2/24/95
Proj Mgr	P J Laurin	2-23-95
QA	R Stephen Luker	2 21 95

16. Originator's Supervisor (print/sign/date): Peter J Laurin — No Training Required

17 Assigned SME/Phone/Pager/Location	18. Cost Center	19. Charge Number	20 Requested Completion Date	21 Effective Date
	03112	989214		02-28-95

22 Accelerated Review? Yes ☐ No ☒ — 23.ORC Review: N/A NOT REQUIRED

24 Responsible Manager (print,sign,date): Peter J Laurin

RF-47940 (5/93)

ADMIN RECORD

REVIEWED FOR CLASSIFICATION / UCNI
BY _____
DATE _____

LIST OF APPENDIXES

LIST OF EFFECTIVE PAGES

Pages	Effective Date	Change Number
3, 7, 34	06/01/94	94-DMR-001007
8, 31	02/28/95	95-DMR-000104

TOTAL NUMBER OF PAGES 34

Neither the U S C S nor the U S Department of Agriculture grain size scales have a common base However, both the Wentworth and the Atterberg grain size scales are geometric series with a base of 2 and 10, respectively

It should be noted that the divisions between gravel and sand, as well as those between sand and silt, vary from scale to scale This makes it somewhat difficult to compare the U S C S grain size analyses with analyses based on other scales Most geotechnical laboratories show only the U S C S grain size ranges on the graph paper Figure GT 1-1 is a modified graph that shows both the U S C S and Wentworth grain size ranges ASTM D422, "Particle-Size Analysis of Soils," should be used to perform the grain size analyses but should be modified to include a 230 sieve when bedrock is being analyzed

Sieves and grain size charts should be used regularly when grain size determinations are made It is important to mention that a small degree of error is inherent between grain size determinations made in the field and those derived in the laboratory Field analyses are based on volumetric (visual) measurements, whereas the laboratory analyses are based on weight measurements However, the procedures employed in this SOP significantly reduce the margin of error

The logger is responsible for subdividing the core into intervals of similar lithologies From each interval, a small representative sample will be collected, dried, desegregated, and sieved, using the appropriate sieve nest The volume of material in each size class will be measured using graduated cylinders and beakers and recorded The logger must record the percentages of gravel, sand, silt, and clay Percentages of silt and clay can be estimated with the aid of a binocular microscope The percentage of abundance diagrams in Figure GT 1-5 and the soil reference set will be used when appropriate All percentages should normalize to 100% and be recorded in the grain size column of the logging form This detailed sieving and grain size analysis will not be required for the boreholes drilled as part of the OU-2 Trenches and Mound Site Characterization Program The geologist's field log will be sufficient for subsurface interpretation purposes

94-DME-001007 94-DME-001007 95-DME-000104 94-DME-001007

6.2.3 Logging

The core or cuttings will be logged according to all of the procedures previously covered in this SOP

6.2.4 Photographing the Core

Any and all photographing procedures must conform to plant security controls Each box of core should be photographed with a 35 mm camera before it has been logged and sampled If the core is photographed at RFP, the camera will have to be cleared and left on site until the project is completed In addition, all of the film must be processed by RFP An identification tag and a Kodak color patch should appear in each photograph The identification tag should contain

- The well name
- Footage values of the core in the box
- The box number and the total number of boxes for that borehole, such as Box 1 of 7
- Date core was taken
- Project number

Core photography requirements will be lifted for those cores generated by the OU-2 Trenches and Mound Site Characterization Program

6 2.5 Sampling

Samples that are taken for grain size analyses and permeameter tests should be removed only after the core has been logged and photographed At the time a sample is taken, a wood block with the following information must be placed in the core box at the point the sample was removed